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10/671,261

09/24/2003

Mehdi Vaez-Iravani

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EXAMINER

PHAM, HOA Q

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------|-------------------------|--|
| Office Action Summary | Applicant(s) | Applicant(s) <i>apw</i> | |
| | 10/671,261 | VAEZ-IRAVANI ET AL. | |
| | Examiner | Art Unit | |
| | Hoa Q. Pham | 2877 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 85-114 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 85-114 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 98, 99 and 111-112 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 98-99 and 111-112 recite that "the light beams is P or S polarized with respect the sample surface"; however, independent claims 85 and 101 recite that the "device receiving radiation scattered by the sample surface irrespective of polarization state of such radiation", it does not make any sense and seems that two phrases are contradict to each other.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 85, 88, 91-97, 100-110, and 114 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima et al (JP-357013340A).

Regarding claims 85, 92-96, 101, and 106-110, Oshima et al teaches the use of two light sources (7, 12) for generating two different light beams at different wavelengths and does not teach the use of a light source and means for converting radiation beam from the light source into a first and second beams. However, the

examiner takes the Official notice that such a feature is well known in the art. Those of ordinary skill in the art at the time the invention was made to replace the first and second light sources of Oshima et al by a single light source and means for converting into two light beams because they are equivalent in function.

Regarding claims 88 and 102-103; figures 8 and 10 of Oshima et al show that the light beam from the light source (7) is perpendicular to the inspected surface.

Regarding claims 91 and 105, figures 8 and 10 of Oshima et al show that first and second illuminated spots are coincided.

Regarding claim 97, detectors 11a and 11b in figure 10 are used to detect first wavelength and second wavelength, respectively.

Regarding claims 100 and 114, Oshima et al teaches step of comparing detected scattered light originating from the first beam and that originating from the second beam to distinguish between the dust and pinhole (see abstract of Oshima et al).

Regarding claim 104, see figures 8 and 10 of Oshima et al.

4. Claims 86-87, 89-90, 98-99, and 111-113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima et al in view of Louderback (4,360,275) and Koizumi et al (4,740,079).

Regarding claims 86-87, Oshima et al does not teach that a paraboloidal mirror is used for collecting the scattered light from the sample surface to the detector. However, such a feature is known in the art, for example, as taught by Louderback. Louderback, from the same field of endeavor, teaches that the paraboloidal mirror 30 can be use for

collecting scattered light (see figure 1). It would have been obvious to one having ordinary skill in the art to include in Oshima et al a paraboloidal mirror as taught by Louderback if a certain collection angle is desired.

Regarding claims 89-90, see figures 8 and 10 of Oshima et al.

Regarding claims 98-99 and 111-113, Koizumi et al, from the same field of endeavor, discloses a method and apparatus for detecting foreign substances comprises S and P- polarized sources (15H and 15L) for supplying a first beam at a first wavelength along a first path and second beam at a second wavelength along a second path onto a surface of the sample (1) said two paths being at different incidence angles to the sample surface; one or more detectors (20H and 20L) for detecting radiation at the first and second wavelengths, and an optical device (9) for receiving scattered light from the sample surface and originating from the first and second beams and focusing the scattered light to the detectors (figure 17, column 9, lines 6-14). It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the light sources of Oshima et al by S- or P- polarized light source as taught by Koizumi et al, thus the signal to noise ratio is improved.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).


6. Claims 85-114 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-29 of U.S. Patent No. 6,639,662. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claimed invention is broader than that of patent and all the limitations of the present claims 85-114 are recited in claims 1-29 of the patent.

7. Claims 85-114 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-51 of U.S. Patent No. 6,201,601. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claimed invention is broader than that of patent and all the limitations of the present claims 85-114 are recited directly or indirectly in claims 1-51 of the patent.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (571) 272-2426. The examiner can normally be reached on 7:30AM to 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hoa Q. Pham
Primary Examiner
Art Unit 2877

HP
May 27, 2004